Ascending to the Cloud

A Primer on When Enterprises Should and Shouldn't Move to the Cloud

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Accelerating IT to the
Speed of Business

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Agenda

▶ Defining "the Cloud"

▶ The Drivers

▶ Strategy for Moving to the Cloud

▶ Cloud Readiness Assessment

▶ Security Considerations

▶ Finding the Right Partner

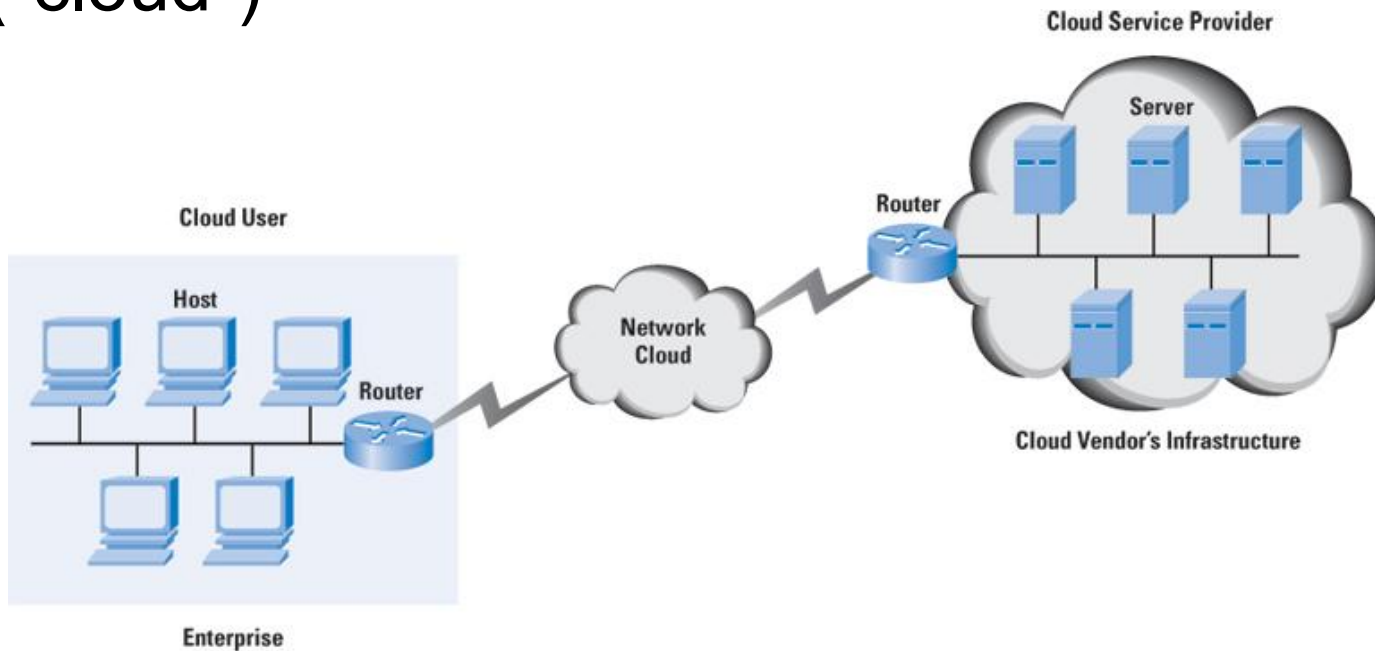▶ Key Takeaways and Q & A

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Defining the Cloud

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Defining the Cloud

▶ In its simplest terms, cloud computing is a way to access IT services over the internet ("cloud")

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The Drivers

▶ Consumerization of IT

▶ Mobile invasion is here

▶ Consolidation

▶ Disaster Recovery

- 64% of Feds see desktop from the cloud as a viable solution for their agency
- 36% of agencies are currently assessing the opportunity for desktop from the cloud
- 38% are working on or have implemented cloud technology/solutions

– MeriTalk Report, Mobile Powered Government, Feb, 27, 2012

- Although at some level mobile is unique, **the devices are just another form of endpoints in your infrastructure**. This means whichever technologies you procure should have a road map for integration into your broader endpoint protection strategy.

– Forrester, Market Overview: Mobile Security, Q4, 2011

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Consumerization of IT: Mobile

Share of global Q4 2011 smartphone sales to end users, by OS

Android 51%
iOS 24%
Symbian 12%
RIM 9%
2% 2% 1%
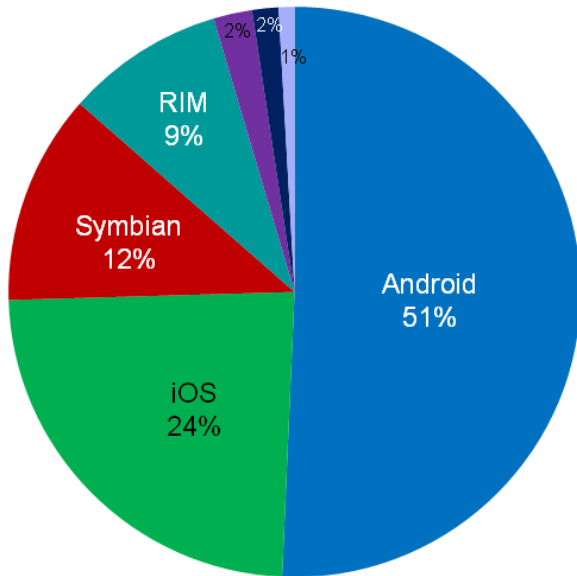
Legend: Android | iOS | Symbian | RIM | Bada | Microsoft | Others
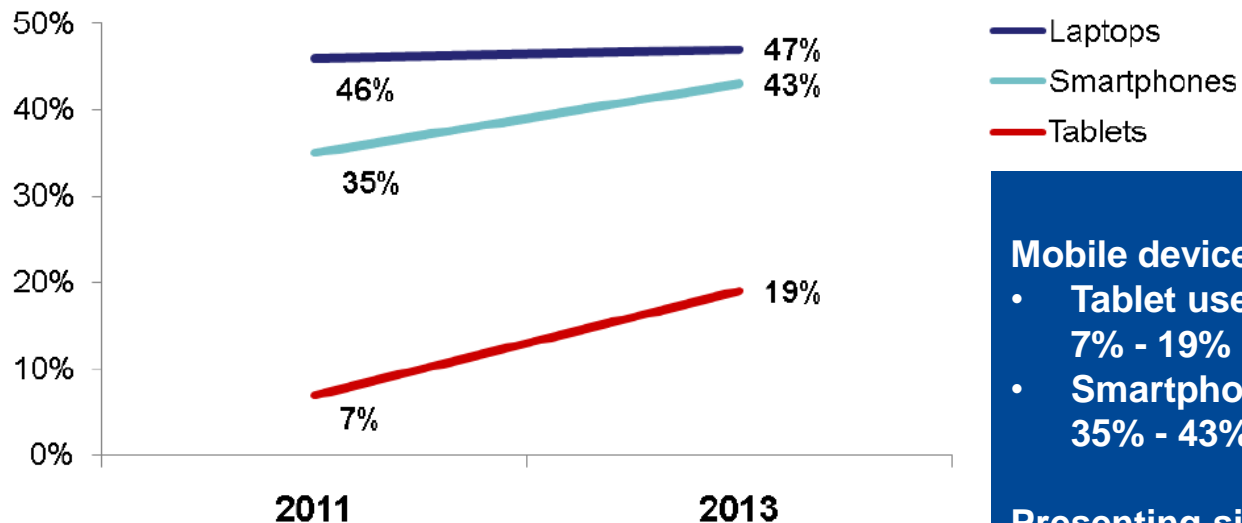
Source: Gartner 2012; does not include media tablets

Google, Apple, and corporate employees are the big winners; Nokia, RIM, and IT departments are facing challenges

▶ Android and iOS accounted for 75% of all smartphone shipments

▶ Consumer-oriented devices from Apple and Google have quickly penetrated the enterprise, but remain largely unmanaged

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The Mobile Device Invasion is HERE

- Feds anticipate increased use of PC alternatives

Approximately what percentage of employees at your agency *use or will use* each of the following devices for work-related tasks?

Laptops — 46% (2011), 47% (2013)
Smartphones — 35% (2011), 43% (2013)
Tablets — 7% (2011), 19% (2013)

Source: MeriTalk Report, Mobile Powered Government, Feb, 27, 2012

Mobile device growth 2011 – 2013
- **Tablet use more than doubling: 7% - 19%**
- **Smartphone use growth: 35% - 43%**

Presenting significant challenges (as rated by IT Pros):
- **Security risks: 78%**
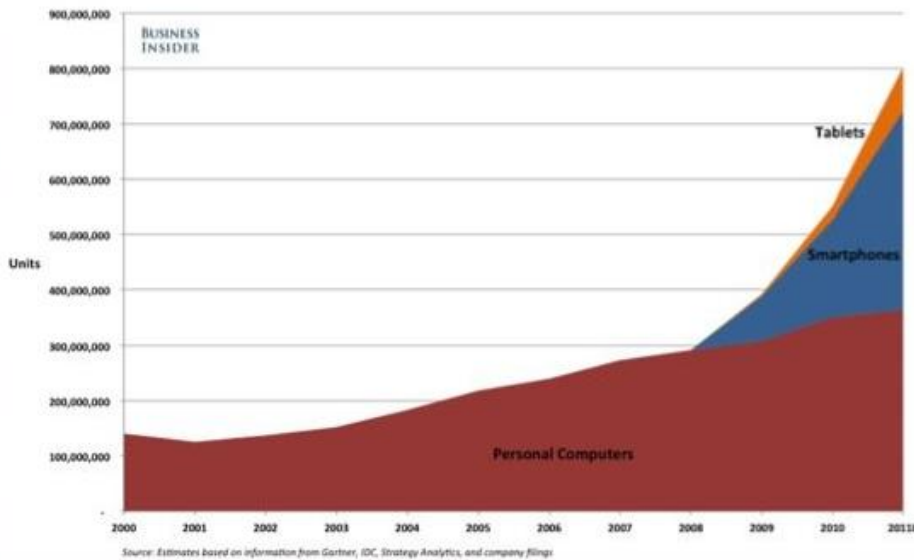- **IT Staffing: 43%**
- **Diversity of devices/platforms: 39%**

Resistance is futile…

Mobile devices outpace PC Sales

Projections for the future of Endpoints

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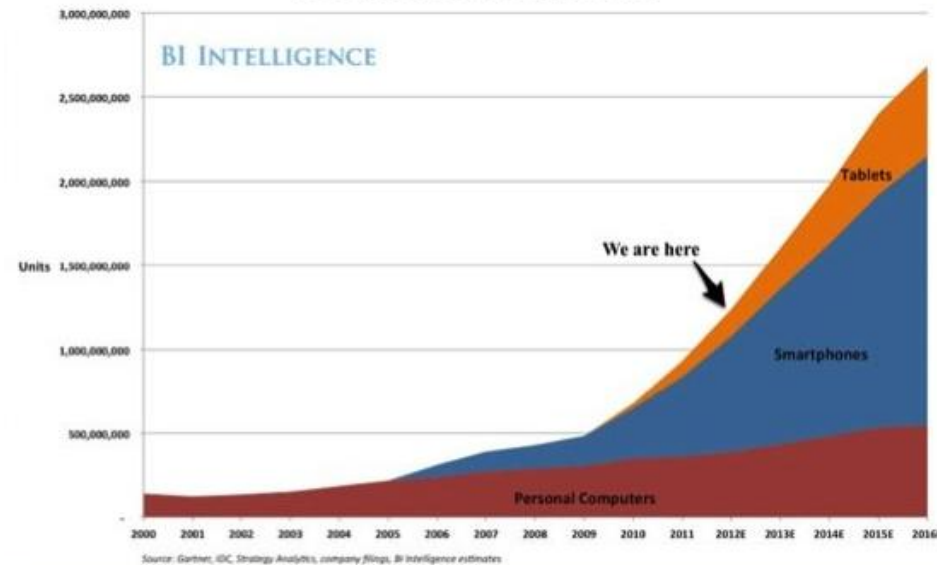
Strategy for Moving to the Cloud

▶ Understand your application eco-system and its moving parts

▶ Full cloud or hybrid? (blending on-premise and cloud)

▶ Hybrid provides a phased approach

  ▶ Seamless integration between cloud and physical services
  ▶ Ability to leverage the cloud benefits without disrupting current business processes and requirements

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Why a Cloud Readiness Assessment?

▶ Four key questions:
1. What applications can be virtualized?
2. What servers can be virtualized?
3. Can our current network handle a virtualization platform?
4. Whose cloud should we use? (build vs. rent)

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Ready or not?

- Data collection and analysis should be performed in the following areas:
  - Network Performance
    - Current bandwidth (performance/usage/etc.)
    - Device configurations (router/switch/firewall)
    - Any identified issues
  - Server Infrastructure
    - Hardware specifications
    - Operating System detail
    - Current server configuration
    - Current performance metrics
  - Application
    - Confirm whether an app can be virtualized
    - Identify virtualization options (virtual private server vs. hosted application vs. SaaS)
    - Work with application vendor for best practices around virtualizing

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What Doesn't Belong in the Cloud?

- ▶ Not all applications are suited for the cloud
  - ▶ Some workloads are not yet fully capable of moving unless you move the entire application eco-system to the cloud
  - ▶ Sometimes it isn't practical because of the cost to move an application, or due to significant CAPEX sunk into the existing environment

- ▶ Examples of what doesn't belong in the cloud include:
  - ▶ High Network I/O
    - ▶ CIFS – Common Internet File Systems (i.e. file servers)
  - ▶ Authentication (i.e. for Active Directory)
  - ▶ Print Servers
 - ▶ Highly bandwidth intensive (Client/Server)

Security Considerations

▶ Approach security in the cloud the same as you would in your own datacenter
  ▶ Have firewalls before and after your DMZ (demilitarized zone)
  ▶ Do not allow direct access to your core infrastructure

▶ Be certain you can take your security policies with you
  ▶ Vs. having to bend to a particular cloud provider's restrictions

▶ Risks
  ▶ Beware of open APIs, which hackers can compromise
  ▶ Avoid "holes" – by developers that integrate between the cloud and the physical environment. Holes in the applications they write can be used to compromise data

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Cloud Security
Consumer vs. Enterprise
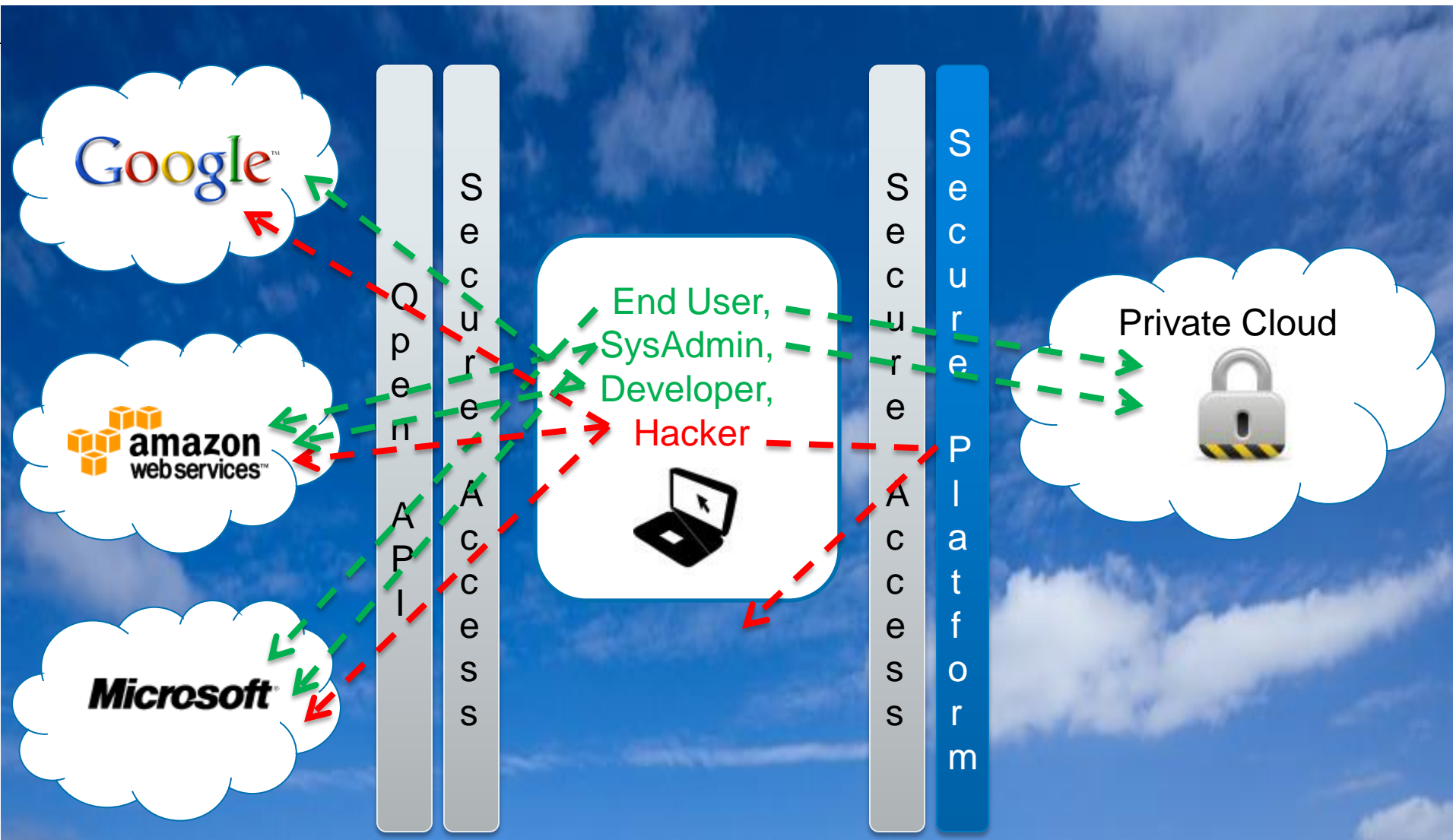
Finding the Right Partner

▶ **Managed Services**
  ▶ Single point of accountability
  ▶ Understands your critical systems and keeps them up and running
  ▶ IT and user support when you need it
  ▶ Proactive and preventative management and maintenance
  ▶ Visibility into the health of your systems
  ▶ Ability to add, change, delete services quickly and easily as needed

▶ **Available on call**
  ▶ 24x7 live support
  ▶ Familiarity with your agency and users' unique needs
  ▶ Ability to troubleshoot remotely and securely

▶ **Secure access**
  ▶ Ensures all user "endpoints" are secure with up to date anti-virus and anti-spyware services
  ▶ Secures information, keeping it backed up and quickly accessible
  ▶ Meets compliance requirements
  ▶ Practices are regularly audited by third party

▶ **Supports any device**

▶ **Controls cost**
  ▶ On-demand services: pay only for what you need
  ▶ Breadth of services that allow you to mitigate CAPEX to buy, implement and upgrade your own technology
  ▶ Service flexibility and scalability, providing a low risk way to get incremental IT resources without a long term commitment or investment
  ▶ Delivers access to subject matter experts on an as needed basis vs. full time staff

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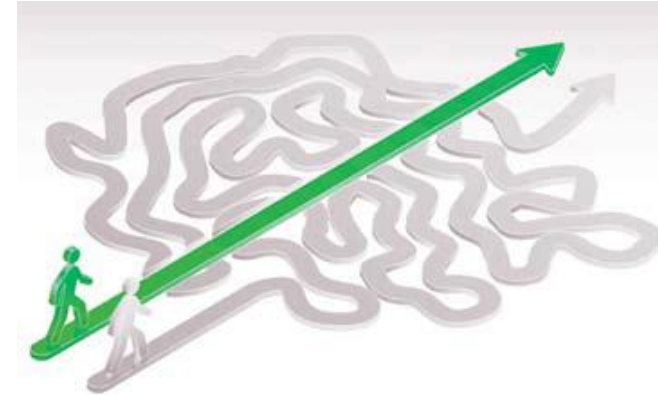
Multi-tier Application Eco-system
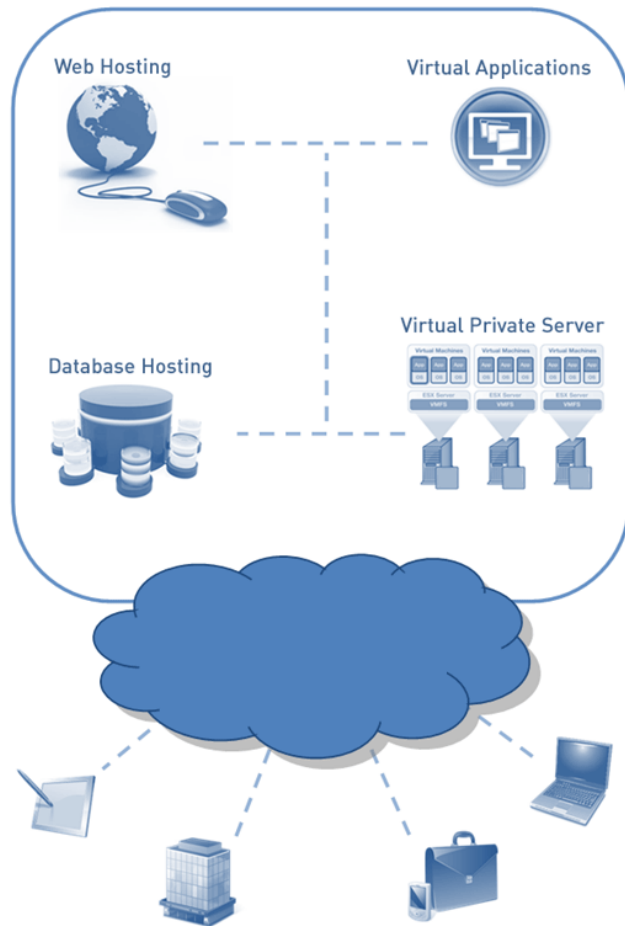
- ▶ Four Tier Architecture
- ▶ VDI Integration
- ▶ Platform & Infrastructure
- ▶ Secure Access
- ▶ Secure APIs
- ▶ Management & Monitoring
- ▶ DBA Services
- ▶ Disaster Recovery Options

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The 3x4 Takeaway

The right workloads
1. Which applications should be virtualized?
2. Which platforms can I virtualize?
3. Which path: build or consume my cloud?
4. Will my network support cloud demands?

…for the right reasons
1. Alignment with business needs
2. Alignment of key resources
3. Alignment with your constituents
4. Executive sponsorship

…with the right partner
1. 24x7 live support
2. Breath of Services
3. Experience
4. Security in DNA

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Questions?